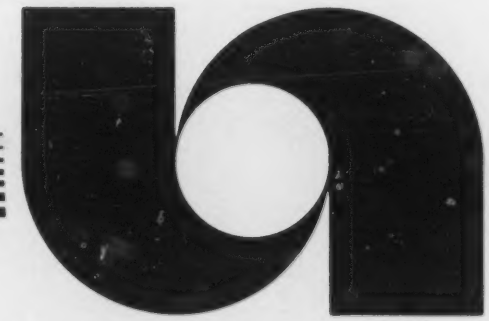
NASIS

DESIGNS, PROCEDURES, INSTRUMENTS

AND FORMS FOR THE

1982 NASIS



NEBRASKA ANNUAL SOCIAL INDICATORS SURVEY

Bureau of Sociological Research
Department of Sociology
University of Nebraska–Lincoln
Lincoln, Nebraska 68588-0325
Telephone: (402) 472-3672

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DESIGNS, PROCEDURES, INSTRUMENTS AND FORMS FOR THE 1982 NASIS

Helen A. Moore
Department of Sociology

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Introduction

This report presents a detailed account of the design and fielding of the sixth Nebraska Annual Social Indicators Survey. Users of NASIS82 data will find it an important reference source for answers to questions about how the information was gathered.

The Nebraska Annual Social Indicators Surveys were conceived as vehicles both for producing current, topical information about Nebraskans and also for monitoring change in life quality. Thus the surveys alternate between a cross-sectional and a panel component: each odd year the initial panel from 1977 is reinterviewed, whereas each even year a fresh cross-sectional sample is chosen. As an even year, NASIS82 represents a new cross-section of the adult population of Nebraska.

As in earlier surveys, NASIS82 is a joint effort of the Sociology Department of the University of Nebraska-Lincoln and a variety of public agencies. While the final responsibility for the design and fielding of the survey rests with the Bureau of Sociological Research, both the costs of the survey and the planning of it have been shared through an Advisory Committee of public agencies.[1]

Instrument Design and Item Selection

The Nebraska Annual Social Indicators Surveys are designed to meet the data needs of a diverse group ranging from sociological researchers to health

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[1]See Appendix A for a copy of the Prospectus which details the circumstances under which public agencies participated in the Survey as well as a list of the membership of the NASIS82 Advisory Committee.

planners. In order to meet these needs, the instrument for each survey is developed in two stages. First, a set of "core" questions is developed. These are repeated each year and cover basic demographic information, the quality of life, and general sociological indicators. The second set of questions comes from the agencies and organizations that participate in the survey. The two sets of questions are interdependent, thus the core questions are evaluated by participating agencies and the agency questions are evaluated by the Executive Committee of the Bureau of Sociological Research.

In order to meet the goal of providing trend data on the quality of life in Nebraska, a primary factor in choosing core questions for NASIS82 was comparability with the earlier five studies. The core questions included in the previous five surveys were carefully evaluated for utility, comparability with other surveys, and validity. On the basis of this review, a few core questions were replaced, some were discarded, and some reworded. The only major change in the core questions was instituted in 1980 for the way data are gathered on income. The initial method of asking income (detailed data on sources of income, exact amount from each source, and exact amount of total income) produced an undesirably high level of refusals and "don't knows": 22 percent in 1979. Thus, in 1980 it was decided to ask income in categories only. While this produces less exact and less flexible data, it was hoped that it would provide general economic data on many more households. This expectation was borne out: in NASIS80 only 5.3 percent of households failed to provide income data. In 1982, only 2.8 percent of households failed to provide income data.

The next step in the development of the instrument was to determine the data needs of the participants in the survey. Public agencies and faculty members all submitted questions which they wanted to have included in the survey. Aside from the core questions and questions included by the Study Director, all of those submitting questions were "buyers," i.e., they contrib-

questions from each buyer came in, they were subjected to 20 pretest interviews conducted by five professional interviewers. The information from these pre-tests was used to improve the questions as well as to provide an estimate of interviewing time needed for each question set. For many buyers, this procedure was repeated two or three times in order to trim time or to test revisions in the question wording.

In developing the instrument for NASIS82, it was our goal to keep the interview to a maximum of 45 minutes. Past experience suggests that this is the maximum length of interview that can be sustained without loss of data quality due to respondent (and interviewer) fatigue. The pre-tests on individual question-sets and the core items indicated that the total time needed for these items would be close to 58 minutes. In order to reduce this time, but still provide all buyers with the data they needed, six buyers agreed that data on half of the sample (900 cases) would be sufficient for their purposes. Thus, two forms of the instrument were developed. Type 1 contained questions on energy use, scarcity of resources, and welfare services. Type 2 contained questions on recreation, social security, an health education programs. This strategy reduced the length of the interview to 45 minutes.

At this stage an interview schedule was roughed out and pre-tested in its entirety. The pretests were completed by five professional interviewers, all by telephone and in the city of Lincoln. Interviewers selected a household in the city that did not contain a friend or relative. During the pre-tests interviewers were instructed to be particularly observant for problems in wording, item ordering, and skip patterns. Following the pre-tests, a debriefing meeting was held with the interviewers to go over the schedule item-by-item and to discuss problems encountered and reactions to the interview. The results of these complete pre-tests indicated that the average interview length was 45 minutes, as estimated. As a result of the pre-tests, a few changes were made in question wording, some additions and clarifications were added to the

interviewer manual, and so on. The results of the pre-tests were communicated to individual buyers, some of whom altered their questions in light of pre-test information.

Simultaneously to the pre-testing, copies of the roughed out schedule were circulated among members of the Advisory Committee and all buyers. A unique feature of the NASIS series is that the data needed by many organizations and for many purposes are all gathered on the same population. This means that agencies or scholars whose primary interest is in health may have the benefit of information on alcoholism, on social security, and on recreation to increase the value of their data. Thus, each participant in the survey is vitally interested not merely in the inclusion of their own questions, but also in the selection of other participants and the core questions. A meeting was held of all buyers and members of the Advisory Committee to review the study design and the instrument. Questions and comments were solicited and some adjustments made as a result of these. Major changes from topical questions of earlier years were carefully reviewed and approved. The final schedule is a joint product reflecting the data needs of these participants.

Schedule Construction

For the most part, all respondents in NASIS82 responded to the same questions. The exception was a ten to twelve minute segment which, for half of the sample, contained questions on energy conservation, welfare services and resources, and for the other half, contained questions on recreation, the social security system and health education programs. The alternation of these two segments required the preparation of two separate forms of the schedules. The completed schedules were stacked with the forms alternating and interviewers were instructed to use the schedules in order to ensure that each form was used for half of the interviews. In addition, the two types were numbered and color-coded within segments. Of the total 1907 interviews, 50.3 percent were Type

1 and 49.7 percent were Type 2 schedules. A copy of the complete schedule is in Appendix B.

Population Sample and Sample Size

The sample is drawn from a population consisting of non-institutionalized persons in households with telephones residing in the State of Nebraska during the survey period (February through April, 1982). Persons under 18 years of age, persons in custodial institutions, group living quarters, and on military reservations, and transient visitors to the state are excluded from the sampling universe. The sample size was targeted at 1800 respondents.0

The Sampling Design

Because random digit dialing was found in evaluation of NASIS77 to produce samples comparable to that of more expensive and time-consuming area probability techniques, the entire sample for NASIS82 was selected through the random digit dialing process.

The procedure for random digit dialing requires getting a list of all three-digit exchanges in the area to be covered and randomly selecting four-digit numbers as suffixes from a universe of all possible four-digit numbers. Every number, including unassigned, unlisted, previously assigned, and newly assigned numbers have equal probability of inclusion in the sample. If an equal number of four-digit numbers are selected from each three-digit area, the numbers will be good in proportion to the population of the area and a self-weighted simple random sample results.

A list of all three digit exchanges in the State of Nebraska had been purchased from the telephone company and used in previous NASIS years. In this sample year, we identified those communities in which 1980 Census data reported a decrease or increase of 10 percent or more in the population. Prefixes for these communities were re-verified through the phone company. All prefixes

for all Nebraska exchanges were then fed into a computer program which generated a set of four random digit numbers for each of the three-digit prefixes. Given the results of earlier NASIS surveys, 70 random numbers were generated for each prefix.

A crucial step in using random digit dialing in rural areas is the screening of out-of-range numbers. In small communities, all numbers may be assigned within a very narrow range, say 1150 - 1199, so that only a small percentage of all possible four digit suffixes are good numbers. In order to reduce the waste of interviewer time entailed in calling non-existent numbers, ranges were established for all prefixes in the state. Telephone directories covering the entire state were purchased and systematically checked to establish for each prefix a range within which numbers were assigned. Through this process some prefixes were also removed from the sample, for example, prefixes for government agencies or businesses.

The ranges for each prefix were then fed into the computer and the 70 random numbers produced on the first pass were screened through these ranges. Only the four-digit suffixes falling within the range were printed. Each number produced by this last step was printed on a separate cover sheet. This cover sheet included the area code, dialing instructions, and the name of the town where the number was located in addition to preliminary interview instructions. A copy of the cover sheet is included in Appendix C.

Selection of Respondent from Household

As NASIS is intended to be a sample of persons rather than households, a procedure was necessary to select the persons to be interviewed in each household contacted using a probability process. It would not be sufficient or representative to interview the person answering the telephone as these persons are not likely to be a random sample of all persons over 18 in the household.

Selection of respondents was accomplished by means of a set of selection tables[2] randomizing the person to be interviewed for households with different numbers of eligible respondents. The selection table was printed on the same cover sheet containing the telephone number to be dialed. Each selection table contained a designated respondent number for each household size category. Thus, if the household contained 3 eligible respondents, one-third of the selection tables called for interviewing the first person listed, one-third the second listed, and the final third, the third person listed. In this manner, every eligible respondent had an equal probability of being selected within households with the same number of eligible respondents. (Interviewers were given a predetermined order in which eligible respondents were to be entered into the table, i.e., wife, husband, then by age, so that it was not possible for them to manipulate the selection tables so that the respondent was the person on the telephone.) After determining the designated respondent, the interviewers were then instructed to ask for that person, if the designated respondent was not the person initially answering the telephone. Often several additional telephone calls were necessary in order to find the designated respondent at home.

It is obvious that a person in a household with five possible respondents would only have one-fifth the chance of being included in the sample as persons living by themselves. Weighting procedures are used in the computerized data file to adjust for these differences in selection probabilities. Thus the resultant sample is of individuals drawn from a sample of the population of individuals and can be treated as a simple random sample. If a sample of households is required, however, it can be achieved by altering the weighting procedures.

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[2]The same procedure was used to select a child for a set of questions requiring a sample of children. A separate selection table was printed on the corner of the cover sheet for this selection process (See Appendix C).

Interviewer Training, Supervision, and Quality Control

All of the interviewers had previous experience in telephone interviewing, and the majority were highly skilled with many years of interviewing experience, not only on local projects but also for such national survey organizations as NORC and the U.S. Bureau of the Census. With only a few exceptions, all of the interviewers used in the survey had previous experience with NASIS.

A field supervisor, herself an experienced interviewer and supervisor, was employed to handle the day-to-day supervision, training, and scheduling of the interviewing. The field supervisor worked closely with the study director in monitoring the progress of the survey and dealing with problems as they would arise. Training for the interviewers involved two steps. First, the Study Director and Interviewer Supervisor met all interviewers in a four-hour session and went over in detail the schedule and the procedures to be used. Each interviewer was given a detailed instruction manual (Appendix D) which they were instructed to read through carefully and which they were required to bring with them each time they interviewed.

Secondly, all interviewers were required to do five practice interviews which were carefully examined by Bureau staff for errors in skip patterns, inadequate records on open-ended questions, etc. (The five interviewers who participated in the pre-tests were not required to participate in this part of the training as they already had substantial experience with the instrument.)

All of the telephoning was done from the offices of the Bureau of Sociological Research in Lincoln using the state WATS line and the direct free line to Omaha. The only calling done at home was a portion of the calls to persons with Lincoln exchanges. The consolidating of interviewing provided an opportunity for very careful supervision. The Supervisor, Study Director, and others on the Bureau staff were always accessible so that questions from the interviewers could be handled immediately and, if necessary, the respondent

called back. The interviewers were required to edit their own interviews before turning them in, after which each interview was very carefully edited by Bureau staff. This was done on a daily basis so that errors could immediately be brought to the attention of the interviewers and corrected. If answers were recorded incorrectly or questions skipped, the interviewer was asked to call the respondent back and correct the error. In addition, five percent of each interviewer's work was verified by a second call to the respondent by the Field Supervisor.

Processing of Completed Interviews

Completed interviews were carefully processed and recorded by the Bureau staff to ensure that each interview was accounted for and its progress along the various steps of editing, coding, keypunching, etc., could be monitored. All interviews were recorded in a process control log. An example of this log is given in Appendix E.

The first step of the processing involved the assignment of a sequence number which was recorded on the cover sheet and on the first page of the interview schedule. Each interview was checked to make sure the cover sheet showing respondent's name, telephone number, and interviewer I.D. was attached to the interview. Then each interview was entered into the process control log and edited by the Bureau staff. Interviews with problems were returned to the interviewers to be corrected, correct interviews were ready for keypunching. This was done directly from the schedule as card numbers and column numbers were included in the printed schedule. Twelve IBM cards of data were keypunched during this step. Every interview was also punched a second time on the verifier. Verification is done to greatly reduce the chance of keypunching errors. As these steps were completed, the completion date was recorded in the log.

Information that could not be keypunched directly from the schedule was